REMARKS

Claims 1-5, 8-14, 16-31, 33-38 and 40-43 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Rosen et al. (U.S. Patent Application Publication Number 20030008657, hereinafter "Rosen"), claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosen in view of Cheng et al. (U.S. Patent Number 6,353,602, hereinafter "Cheng"), and claims 7, 15, 32 and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosen in view of Diaz et al. (U.S. Patent Number 5,442,809, hereinafter "Diaz"). Respectfully disagreeing with these rejections, reconsideration is requested by the applicant(s).

Regarding the rejection of claims 1 and 30, the Examiner cites Rosen [0007, 0012, 0032, 0070, 0087 and 0089], which read as follows (emphasis added):

> [0007] Existing group communication infrastructures provide limited opportunities for significantly reducing the **PTT** latency, i.e., actual PTT latency may not be possibly reduced below the time required to re- establish traffic channels within dormant packet-data sessions. Further, talker and listeners traffic channels are brought up in series, because the only mechanism available to begin waking up a dormant group is to wait for the talker's traffic channel to be re-established to signal the server. Currently, no mechanism exists to send mobile-originated user signaling data on anything other than a traffic channel--a limitation that requires traffic channels to be re-established before any communication between clients and the server can take place.
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> [0012] In one aspect, an apparatus for avoiding simultaneous service origination and paging in a mobile operating in a group communication network includes a receiver, a transmitter, and a processor communicatively coupled with the receiver and the transmitter. The processor is capable of receiving a floor-control request, e.g., in SDB form, from a source communication device **for initiating a group call, initiating a service origination process** for the source communication device, and transmitting a response to the floor-control request from a controller **after the service origination process is complete.**
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> [0032] In one embodiment, the means for requesting the transmission privilege from a CM comprises a push-to-talk (PTT) key or switch. When a user in the NBS 100 desires to transmit information to other net members, the user may depress the push-to-talk switch located on his or her CD, **sending a floor-control request to obtain the transmission privilege** from CM 110. If no other net member is currently assigned the transmission privilege, the requesting user may be granted the transmission privilege and the user may

be notified by an audible, visual, or tactile alert through the CD. After the requesting user has been granted the transmission privilege, information may then be transmitted from that user to the other net member.

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[0070] In one embodiment, the infrastructure may send the wakeup trigger 412 **to a target listener** over some available common forward channels, such as forward paging channel and forward common control channel, while the **target listeners'** traffic channels are not re- established yet. In one embodiment, the infrastructure may send the wakeup trigger 412 to the **target listener** in SDB form, regardless of what channel is used. If the PTT **floor-control request is sent** on the talker's reverse common channel as a SDB message and the target group's dormancy response timer is set to zero at the CM, actual PTT latency at the talker client may be reduced to the time required to send an SDB request message on the reverse link followed by a SDB response message on the forward link.

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[0087] In one embodiment, the CM may buffer the talker's first talk spurt. **After a user has pressed his PTT button** and the user's traffic channels are re-established, he may be allowed to communicate with the CM. At this time, since the listener traffic channels are not yet up, the CM buffers the talker's speech for future transmission to the target listeners. CM buffering may reduce the apparent PTT latency that the talker sees to the approximate time it takes to bring up the talker's traffic channel. FIG. 5 shows CM buffering according to one embodiment.

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[0089] In one embodiment, where a shorter apparent latency is desired, the talker may be allowed to begin speaking before even his traffic channel is re-established. **Because the client MS is not yet in communication with the CM, the signal to the talker to begin talking is made by the client MS. If the talker is allowed to speak before the talker's traffic channel is re- established**, the client MS may buffer the speech. Because communication with the CM has not yet been established, permission to talk is being given "optimistically." FIG. 6 shows client- side buffering according to one embodiment. In one embodiment, both CM buffering and client-side buffering may operate concurrently. Client-side buffering may allow the apparent PTT latency to be small.

In contrast, independent claim 1 recites (emphasis added) "**anticipating** by a radio access network (RAN) that an MS is **likely to be a target of communication** not yet initiated; when a loading level of a serving cell of the MS is below an assignment threshold, **assigning a traffic channel to the MS** to avoid paging-related delays for the MS should the MS become a target of communication." Independent claim 30 recites (emphasis added) "adapted to **anticipate** that a mobile station (MS) is **likely to be a target of communication** not yet initiated, adapted, when a loading level of a serving cell of the MS is below an assignment threshold, to **assign a traffic channel to the MS** to avoid paging-related delays for the MS should the MS become a target of

communication."

The applicants submit that Rosen, as cited, does not teach or suggest assigning a traffic channel to an MS that is likely to be a target of communication that has not yet been initiated. The applicants submit that the Rosen passages cited all pertain to communication sessions that have already been initiated. Thus, the talker and the target / listening devices have been or are being determined as a result of a request to initiate a session. The applicants fail to see where Rosen teaches or suggests anticipating that an MS is likely to be a target of communication that has not yet been initiated and then assigning a traffic channel to that MS. In addition, the applicants also fail to see where Rosen teaches or suggests assigning the traffic channel based on whether a loading level of the serving cell is below an assignment threshold.

Regarding the rejection of claims 12 and 37, the Examiner cites Rosen [0012, 0048, 0049, 0063, 0070, 0091, 0106 and 0110], which read as follows (emphasis added):

> [0012] In one aspect, an apparatus for avoiding simultaneous service origination and paging in a mobile operating in a group communication network includes a receiver, a transmitter, and a processor communicatively coupled with the receiver and the transmitter. The processor is capable of receiving a floor-control request, e.g., in SDB form, from a source communication device **for initiating a group call, initiating a service origination process** for the source communication device, and transmitting a response to the floor-control request from a controller **after the service origination process is complete.**
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> [0048] In one embodiment, when the packet data service is active, resources in the infrastructure, e.g., base station transceiver subsystem (BTS), base station controller (BSC), interworking (IWF), and the radio link are actively assigned to the mobile station (MS). In an IP-based VoIP dispatch service, while there is an active conversation going on between group participants, the packet data connection for each user remains active. However, after a period of inactivity, i.e., "hang time," in the group communications the user traffic channels may transition to the dormant state.
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> [0049] The transition to the dormant state conserves system capacity, reduces service cost and battery drain, and makes the user available to receive incoming conventional voice calls. For example, when the user is in an active packet data call, he will generally be considered to be "busy" to incoming voice calls. If the user's packet data call is in the dormant state, the user may be able to receive incoming voice calls. For these reasons, it is desirable to transition the packet data call to the dormant state after periods of packet data inactivity.

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[0063] Therefore, use of the available reverse common channels and/or SDB feature to signal **floor-control requests** to the CM, when a mobile station does not have active dedicated traffic channels, reduces the total time required to wake up the **participating mobiles**. Although the talker client may not receive confirmation that its floor-request has been granted until the talker's forward traffic channel is re-established, the ability to quickly signal the CM to begin waking up **participating listeners** reduces the overall latency.

...

[0070] In one embodiment, the infrastructure may send the wakeup trigger 412 **to a target listener** over some available common forward channels, such as forward paging channel and forward common control channel, while the **target listeners'** traffic channels are not re- established yet. In one embodiment, the infrastructure may send the wakeup trigger 412 to the **target listener** in SDB form, regardless of what channel is used. If the PTT **floor-control request is sent** on the talker's reverse common channel as a SDB message and the target group's dormancy response timer is set to zero at the CM, actual PTT latency at the talker client may be reduced to the time required to send an SDB request message on the reverse link followed by a SDB response message on the forward link.

...

[0091] In one embodiment, **the client** MS may buffer media to control the apparent PTT latency experienced by the user. The combination of mobile- originated SDB and client-side media buffering may reduce the delays associated with re-establishing active traffic channels.

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[0106] In one embodiment, the mobiles may operate under a packet data standard that provides an additional dormant/idle state in which the mobile and infrastructure maintain the PPP layer state associated with the mobile while allowing either endpoint to release the dedicated traffic channels and other resources associated with the mobile's packet-data service option call. Either the mobile or the infrastructure may transition the state of the packet data call from dormant/idle state to active state by re-establishing a traffic channel and renegotiating RLP. The time required to re-establish the traffic channel may be dependent on whether the mobile or the infrastructure initiates the re-establishment. However, in both cases the delay is comparable to that required to originate a new call on the system, as essentially all system resources may need to be requested and allocated to the mobile.

...

[0110] In one embodiment, upon receiving an indication from the CM that a subscribed group has transitioned to the group-dormant state, **a client mobile may initially transition itself to the control-hold mode and, after an additional sustained period of inactivity, make a further transition to the idle mode**. Therefore, control-hold mode offers a mechanism to significantly reduce the time required to re-establish dedicated traffic channels **once a user presses PTT or a wakeup request trigger is received at the infrastructure.**

In contrast, independent claim 12 recites (emphasis added) "**anticipating** by a radio

access network (RAN) that an MS is **likely to be a target of communication not yet initiated; signaling the MS to transition** to at least one operational mode in which paging-related delays for the MS are reduced." Independent claim 37 recites (emphasis added) "adapted to **anticipate** that a mobile station (MS) is **likely to be a target of communication not yet initiated**, adapted to **signal the MS to transition** to at least one operational mode in which paging-related delays for the MS are reduced."

The applicants submit that Rosen, as cited, does not teach or suggest signaling to transition operating modes an MS that is likely to be a target of communication that has not yet been initiated. The applicants submit that the Rosen passages cited all pertain to communication sessions that have already been initiated. Thus, the talker and the target / listening devices have been or are being determined as a result of a request to initiate a session. The applicants fail to see where Rosen teaches or suggests anticipating that an MS is likely to be a target of communication that has not yet been initiated and then signaling that MS to transition operational modes.

Regarding the rejection of claims 2, 17 and 18, the Examiner cites Rosen [0007] (quoted above). However, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of these claims.

Regarding the rejection of claim 3, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 4, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 5, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 6, the applicants fail to see how Rosen in view Cheng, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 8, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 9, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 10, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 13, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 14, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 16, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 20, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 23, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 24, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 25, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 27, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 28, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 31, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 33, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Regarding the rejection of claim 38, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

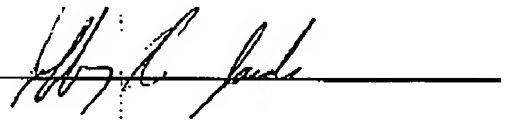
Regarding the rejection of claim 40, the applicants fail to see how Rosen, as cited, teaches or suggests all the limitations of this claim.

Since none of the references cited, either independently or in combination, teach all of the limitations of independent claims 1, 12, 30 or 37, or therefore, all the limitations of their respective dependent claims, it is asserted that neither anticipation nor a prima facie case for obviousness has been shown. No remaining grounds for rejection or objection being given, the claims in their present form are asserted to be patentable

over the prior art of record and in condition for allowance. Therefore, allowance and issuance of this case is earnestly solicited.

The Examiner is invited to contact the undersigned, if such communication would advance the prosecution of the present application. Lastly, please charge any additional fees (including extension of time fees) or credit overpayment to Deposit Account No. **502117 -- Motorola, Inc.**

Respectfully submitted,
J. Harris et al.

By: 

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